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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,060	07/16/2003	Ronald van Haalen	LCNT/Van Haalen	8826
46363 7590 10/09/2007 PATTERSON & SHERIDAN, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702			EXAMINER MOORE, IAN N	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/621,060	Applicant(s) HAALEN ET AL.	
	Examiner Ian N. Moore	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 8/29/07. These drawings are accepted by the examiner.

Claim Objections

2. Claims 1-5, 15 and 16 are objected to because of the following informalities:

Claim 1 recites the clause the optional language “**operable to**” in lines 7. The claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure.

Applicant is suggested to revise the claim, or clarify that the steps, which follows “operable to”, to be performed are required (not optional).

Claim 15 recites “a period of time” in line 2. For consistency and clarification with “a period of time” recited in claim 11, line 8, it is suggested to change “a period of time” in line 2, to “**the** period of time”.

Claim 16 recites “**only data packets the signal input**” in line 1. For clarification it is suggested to use proper proposition between “only data packets” and “the signal input”.

Claims 2-5 are also objected since they are depended on the objected claim 1 set forth above.

Appropriate corrections are required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-4,6-9, and 11-16 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,370,112 (hereinafter refers to as Voelker) in view of Almay (US 5,809,011).

Regarding claim 1, a communication network comprising (see Voelker claim 1, lines 1-5):

at least two mutually different routing paths for conveying data packets to respective input of a switch (see Voelker claim 1, step a-c);

the switch operable to process data packets received at the plurality of inputs and forward the received commonly sourced data packets in a correct packet order via an output (see Voelker, claim 1, step a-d);

wherein in response to a commonly sourced data packet being received out of order at a first of the plurality inputs, commonly sourced data packets received at the first input are

discarded for a period of time while commonly sourced data packets received at the other inputs are processed (see Voelker claim 1, steps e-g).

Voelker does not explicitly disclose ports.

However, Almay teaches at least two mutually different routing paths for conveying data packets (see FIG. 1, different/separate paths a-b and A-B for transmission of packets; see col. 2, line 33-50, see col. 3, line 10-26) to respective input ports of a switch (see FIG. 1, to two input interfaces (i.e. first interface from a-b path and another interface from A-B path) of Node B; see col. 2, line 38-67; see col. 4, line 20-35);

the switch operable to process data packets received at the plurality of input ports (see FIG. 1, Node B processing packets received at received/input interfaces a-b and A-B; see col. 2, line 45-65; see col. 3, line 1-10) and forward the received commonly sourced data packets (i.e. both paths a-b and A-B have common source Node A which originated common source data packet) in a correct packet order via an output port (see FIG. 1, routing the received packet from source node A in a correct/proper order (i.e. note that a correct/proper order of packets is formed when nodes A and B deactivating the route a-b for a predetermined time then activating the route A-B) via an output interface of node B; see col. 1, line 31-36; col. 2, line 56 to col. 3, line 50).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ports, as taught by Almay in the system of Voelker, so that it would minimum loss of data; see Almay col. 1, line 45-50.

Regarding Claim 2, Voelker discloses response to a commonly sourced data packet being received out of order at a second of the plurality inputs, commonly sourced data packets received at all of the inputs are discarded for a period of time (see Voelker claim 1, step e-g).

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Almay discloses in response to a commonly sourced data packet being received at a second of the plurality input ports (see FIG. 2, when receiving packets/cells at the second interface A-B; see col. 3, line 1-60), commonly sourced data packets received at all of the input ports are hold/wait for a period of time (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing packets/cells at the first interface a-b or other interfaces (since ATM node can have more than two interfaces, see Almay col. 5, line 1-16; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20).

Regarding Claim 3, Voelker discloses the period of time lasts until fill-the switch is informed that re-ordering of the commonly sourced data packets is no longer possible (see Voelker claim 1, 4). Almay discloses the period of time lasts until the switch is informed that re-ordering of the commonly sourced data packets is no longer possible (see col. 3, line 1-50; predefined period is defined such that ordering of packets at the new route connection that transmit cells/packets from possible and not disrupted. Since the predefined time last until the "ordering" of packet is "possible/not-disrupted", and thus "re-ordering" of packets are "not possible/disrupted").

Regarding Claim 4, Voelker discloses the period of time has a predetermined length of time (see Voelker, claim 1-4). Almay discloses the period of time has a predetermined length of time (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing packets/cells from subscriber A at the first interface a-b for predetermined period).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ports, as taught by Almay in the system of Voelker, so that it would minimum loss of data; see Almay col. 1, line 45-50.

Regarding claim 6, a switch for use in a communication network the switch receiving data packets having a packet order, determining whether the received data packets are in correct order, and forwarding the received data packets in correct packet order, the switch comprising (see Voelker, claim 1, lines 1-4, steps a-c):

at least two incoming/inputs for receiving the data packets via respective routing paths and an output for forwarding data packets (see Voelker, claim 1, steps a-d);

originating from the source, wherein in response to a commonly sourced data packet being received out of order at a first of the plurality inputs, commonly sourced data packets received at the first input port are discarded for a period of time while commonly sourced data packets received at the other inputs are processed (see Voelker, claim 1, steps e-g).

Voelker does not explicitly disclose ports.

However, Almay discloses at least two incoming ports for receiving the data packets (see FIG. 1, two input interfaces to Node B receiving packets) via respective routing paths (see FIG. 1, via different/separate paths a-b and A-B; see col. 2, line 33-67; see col. 4, line 20-35) and an output port for forwarding data packets (see FIG. 1, 3, and output interface of Node B for routing packets; col. 2, line 56 to col. 3, line 50);

wherein in response to a commonly sourced data packet being received at a first of the plurality input ports (see FIG. 1, 2, after receiving cells/packets from source node A at the first input interface a-b; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20), commonly sourced data packets received at the first input port are wait/hold for a period of time (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing/holding packets/cells from Node A at the first interface a-b for predetermined period) while commonly sourced data packets received at the

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other input ports are processed (see FIG. 2, while/when receiving packets/cells from Node A at the second interface A-B; see col. 3, line 1-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ports, as taught by Almay in the system of Voelker, so that it would minimum loss of data; see Almay col. 1, line 45-50.

Regarding Claim 7, the claim, which has disclosed all the limitations of the respective claim 2. Therefore, it is subjected to the same rejection as set forth above in claim 2.

Regarding Claim 8, the claim, which has disclosed all the limitations of the respective claim 3. Therefore, it is subjected to the same rejection as set forth above in claim 3.

Regarding Claim 9, the claim, which has disclosed all the limitations of the respective claim 4. Therefore, it is subjected to the same rejection as set forth above in claim 4.

Regarding claim 11, a switch configured for receiving data packets having a packet order, determining whether the received data packets are in correct order, and forwarding the received data packets in correct packet order, comprising (see Voelker, claim 1, lines 1-5):

a plurality of inputs for successively receiving said data packets from a respective plurality of routing paths (see Voelker claim 1, steps a-d); and

an output for forwarding data packets (see Voelker claim 1, steps a-d);

wherein in response to a data packet being received out of order at a first of any one of the plurality inputs, data packets are discarded for a period of time at the first input while being allowed at the other inputs (see Voelker claim 1, steps e-g).

Voelker does not explicitly disclose ports.

However, Almay discloses a plurality of input ports for successively receiving said data packets (see FIG. 1, two input interfaces to Node B receiving packets) from a respective plurality of routing paths (see FIG. 1, from different/separate paths a-b and A-B; see col. 2, line 33-67; see col. 4, line 20-35); and

an output port for forwarding data packets (see FIG. 1, 3, and output interface of Node B for routing packets; col. 2, line 56 to col. 3, line 50);

wherein in response to a data packet being received at a first of any one of the plurality input ports (see FIG. 1,2, after receiving cells/packets from source node A at the first input interface a-b; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20), data packets are wait/hold for a period of time at the first input port (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing/holding packets/cells from Node A at the first interface a-b for predetermined period) while being allowed at the other input ports (see FIG. 2, while/when receiving packets/cells from Node A at the second interface A-B; see col. 3, line 1-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ports, as taught by Almay in the system of Voelker, so that it would minimum loss of data; see Almay col. 1, line 45-50.

Regarding Claim 12, Voelker discloses wherein the data packets are forwarded without the discarded data packets received at the first of the inputs (see Voelker claim 1,4). Almay also discloses ports as set forth above in claim 11.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ports, as taught by Almay in the system of Voelker, so that it would minimum loss of data; see Almay col. 1, line 45-50.

Regarding Claim 13, Voelker discloses the period of time has a predetermined length of time (see Voelker, claim 1-4). Almay discloses wherein the period of time is a predetermined period of time (see FIG. 2, a time is a predefined period of time; see col. 3, line 1-15).

Regarding Claim 14, Voelker discloses wherein the period of time is terminated in response to a determination that a data packet condition is no longer possible (see Voelker claim 1, 4). Almay discloses wherein the period of time is terminated in response to a determination that a data packet condition is no longer possible (see FIG. 2, predetermined time period has elapsed/terminated when determining that receiving packet state/condition impossible since the a-b line/path is deactivated; see col. 3, line 10-30).

Regarding Claim 15, Voelker discloses discard data packets for a period of time at all input ports apart from a single input where data packets are determined to be arriving in the correct order (see claim 1-4).

Regarding Claim 16, Voelker discloses wherein only data packets the single input where data packets are determined to be arriving in the correct order are forwarded (see claim 1-4).

5. Claims 5 and 10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-4 of U.S. Patent No. 6,370,112 (hereinafter refers to as Voelker) in view of Almay (US 5,809,011) and further in view of Merchant (US006535489B1).

Regarding Claims 5 and 10, the combined system of Voelker and Almay discloses the communication network as set forth above in claims 1 and 6.

Neither Voelker nor Almay explicitly disclose an Ethernet Network.

However, utilizing Ethernet 802.3 network is well known in the art in order to provide a standard connection for interoperability. In particular, Merchant discloses an Ethernet network (see FIG. 1, Ethernet 802.3 network; see col. 3, line 45-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ethernet network, as taught by Merchant, in the combined system of Voelker and Soirinsuo, so that it would enable selectively forwarding data packets to appropriate destination based on Ethernet protocol; see Merchant col. 3, line 60-65.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4,6-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almay (US005809011A) in view of Soirinsuo (US006028861A).

Regarding Claim 1, Almay discloses a communication network (see FIG. 1, packet switch communication network), comprising:

at least two mutually different routing paths for conveying data packets (see FIG. 1, different/separate paths a-b and A-B for transmission of packets; see col. 2, line 33-50, see col. 3, line 10-26) to respective input ports of a switch (see FIG. 1, to two input interfaces (i.e. first interface from a-b path and another interface from A-B path) of Node B; see col. 2, line 38-67; see col. 4, line 20-35);

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the switch operable to process data packets received at the plurality of input ports (see FIG. 1, Node B processing packets received at received/input interfaces a-b and A-B; see col. 2, line 45-65; see col. 3, line 1-10) and forward the received commonly sourced data packets (i.e. both paths a-b and A-B have common source Node A which originated common source data packet) in a correct packet order via an output port (see FIG. 1, routing the received packet from source node A in a correct/proper order (i.e. note that a correct/proper order of packets is formed when nodes A and B deactivating the route a-b for a predetermined time then activating the route A-B) via an output interface of node B; see col. 1, line 31-36; col. 2, line 56 to col. 3, line 50);

wherein in response to a commonly sourced data packet being received at a first of the plurality input ports (see FIG. 1,2, after receiving cells/packets from source node A at the first input interface a-b; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20), commonly sourced data packets received at the first input port are wait/hold for a period of time (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing/holding packets/cells from Node A at the first interface a-b for predetermined period) while commonly sourced data packets received at the other input ports are processed (see FIG. 2, while/when receiving packets/cells from Node A at the second interface A-B; see col. 3, line 1-60).

Almay does not explicitly disclose out of order and discard.

However, receiving packets/cells/frames out of order due to changing network condition such as unavailable/fail/congested path and discarding the discarding out of order cells packets/cells/frames received at the port/interface in order to maintain network integrity is so well know in the art. In particular, Soirinsuo teaches a switch (see FIG. 8, 11, Switch) operable to process data packets received at the plurality of input ports (see FIG. 8, 11, processing

cells/packets received at the input channels ports 1104) and forward the received commonly sourced data packets in a correct packet order via an output port (see FIG. 8, 11, route/forward the packets/cells from a source in the same order in which they are transmitted to the output channel port 1106; see col. 9, line 20-35; see col. 10, line 29-46);

wherein in response to a commonly sourced data packet being received out of order at a first of the plurality input ports (see FIG. 8, 11, upon receiving changed cells/packets which are “not” received in the same order in which they are transmitted due to network change path/routing (e.g. failure/congestion) at the first normal input port of 1104; see col. 9, line 20-35), commonly sourced data packets received at the first input port are discarded for a period of time (see col. 9, line 40-45; see col. 10, line 10-30; all cells received at the first/normal/old channel port 1104 are discarded during switch-over interval/time) while commonly sourced data packets received at the other input ports are processed (see col. 10, line 10-30, while/during receiving (and transmitting to the output port) from the new channel port).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide discarding and out of order, as taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

Regarding Claim 2, the combined system of Almay and Soirinsuo discloses all claimed limitations. In particular, Almay discloses in response to a commonly sourced data packet being received at a second of the plurality input ports (see FIG. 2, when receiving packets/cells at the second interface A-B; see col. 3, line 1-60), commonly sourced data packets received at all of the input ports are hold/wait for a period of time (see FIG. 2, col. 2, line 56 to col. 3, line 10;

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deactivating/ceasing packets/cells at the first interface a-b or other interfaces (since ATM node can have more than two interfaces, see Almay col. 5, line 1-16; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20).

Soirinsuo teaches in response to a commonly sourced data packet being received out of order at a second of the plurality input ports (see FIG. 8,11, upon receiving changed cells/packets which are “not” received in the same order in which they are transmitted due to network change path/routing (e.g. failure/congestion) at the second normal input port of 1104; see col. 9, line 20-35), commonly sourced data packets received at all of the input ports are discarded for a period of time (see col. 9, line 40-45; see col. 10, line 10-30; all cells received at the second/normal/old channel port 1104 are discarded during switch-over interval/time) while commonly sourced data packets received at the other input ports are processed (see col. 10, line 10-30, while/during receiving (and transmitting to the output port) from the new/first channel port).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide discarding and out of order, as taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

Regarding Claim 3, Almay discloses the period of time lasts until the switch is informed that re-ordering of the commonly sourced data packets is no longer possible (see col. 3, line 1-50; predefined period is defined such that ordering of packets at the new route connection that transmit cells/packets from possible and not disrupted. Since the predefined time last until the “ordering” of packet is “possible/not-disrupted”, and thus “re-ordering” of packets are “not possible/disrupted”).

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Regarding Claim 4, Almay discloses the period of time has a predetermined length of time (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing packets/cells from subscriber A at the first interface a-b for predetermined period). Soirinsuo also discloses the period of time has a predetermined length of time (see FIG. 8, 11, first/normal connection/port; see col. 9, line 40-45; see col. 10, line 10-30; discarding all cells received from first/normal connection/port from the input source during switch-over interval/time).

Regarding Claim 6, Almay discloses a switch (see FIG. 1, 3, Node B) for use in a communication network (see FIG. 1, packet switch communication network), the switch receiving data packets having a packet order (see FIG. 1, 3, receiving packets in a correct/proper order of packets), determining whether the received data packets are in correct order (see FIG. 1, 3, determine/checking whether the received packets are in a correct/proper order), and forwarding the received data packets in correct packet order (see FIG. 1, 3, routing/forward the received packet from source node A in a correct/proper order (i.e. note that a correct/proper order of packets is formed when nodes A and B deactivating the route a-b for a predetermined time then activating the route A-B); see col. 1, line 31-36; col. 2, line 56 to col. 3, line 50), the switch comprising:

at least two incoming ports for receiving the data packets (see FIG. 1, two input interfaces to Node B receiving packets) via respective routing paths (see FIG. 1, via different/separate paths a-b and A-B; see col. 2, line 33-67; see col. 4, line 20-35) and an output port for forwarding data packets (see FIG. 1, 3, and output interface of Node B for routing packets; col. 2, line 56 to col. 3, line 50);

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wherein in response to a commonly sourced data packet being received at a first of the plurality input ports (see FIG. 1,2, after receiving cells/packets from source node A at the first input interface a-b; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20), commonly sourced data packets received at the first input port are wait/hold for a period of time (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing/holding packets/cells from Node A at the first interface a-b for predetermined period) while commonly sourced data packets received at the other input ports are processed (see FIG. 2, while/when receiving packets/cells from Node A at the second interface A-B; see col. 3, line 1-60).

Almay does not explicitly disclose out of order and discard.

However, receiving packets/cells/frames out of order due to changing network condition such as unavailable/fail/congested path and discarding the discarding out of order cells packets/cells/frames received at the port/interface in order to maintain network integrity is so well know in the art. In particular, Soirinsuo teaches a switch (see FIG. 8, 11, Switch) comprising at least two incoming ports for receiving the data packets (see FIG. 8, 11, the input channels ports 1104 for receiving cells/packets) and an output port for forwarding data packets (see FIG. 8,11, output channel port 1106 for routing cells/packets; see col. 9, line 20-35; see col. 10, line 29-46);

wherein in response to a commonly sourced data packet being received out of order at a first of the plurality input ports (see FIG. 8,11, upon receiving changed cells/packets which are “not” received in the same order in which they are transmitted due to network change path/routing (e.g. failure/congestion) at the first normal input port of 1104; see col. 9, line 20-35), commonly sourced data packets received at the first input port are discarded for a period of

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time (see col. 9, line 40-45; see col. 10, line 10-30; all cells received at the first/normal/old channel port 1104 are discarded during switch-over interval/time) while commonly sourced data packets received at the other input ports are processed (see col. 10, line 10-30, while/during receiving (and transmitting to the output port) from the new channel port).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide discarding and out of order, as taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

Regarding Claim 11, Almay discloses a switch (see FIG. 1, 3, Node B) configured for receiving data packets having a packet order (see FIG. 1,3, receiving packets in a correct/proper order of packets), determining whether the received data packets are in correct order (see FIG. 1, 3, determine/checking whether the received packets are in a correct/proper order), and forwarding the received data packets in correct packet order (see FIG. 1, 3, routing/forward the received packet from source node A in a correct/proper order (i.e. note that a correct/proper order of packets is formed when nodes A and B deactivating the route a-b for a predetermined time then activating the route A-B); see col. 1, line 31-36; col. 2, line 56 to col. 3, line 50), comprising:

a plurality of input ports for successively receiving said data packets (see FIG. 1, two input interfaces to Node B receiving packets) from a respective plurality of routing paths (see FIG. 1, from different/separate paths a-b and A-B; see col. 2, line 33-67; see col. 4, line 20-35); and

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an output port for forwarding data packets (see FIG. 1, 3, and output interface of Node B for routing packets; col. 2, line 56 to col. 3, line 50);

wherein in response to a data packet being received at a first of any one of the plurality input ports (see FIG. 1,2, after receiving cells/packets from source node A at the first input interface a-b; see col. 2, line 35-66; see col. 3, line 30 to col. 4, line 20), data packets are wait/hold for a period of time at the first input port (see FIG. 2, col. 2, line 56 to col. 3, line 10; deactivating/ceasing/holding packets/cells from Node A at the first interface a-b for predetermined period) while being allowed at the other input ports (see FIG. 2, while/when receiving packets/cells from Node A at the second interface A-B; see col. 3, line 1-60).

Almay does not explicitly disclose out of order and discard.

However, receiving packets/cells/frames out of order due to changing network condition such as unavailable/fail/congested path and discarding the discarding out of order cells packets/cells/frames received at the port/interface in order to maintain network integrity is so well know in the art. In particular, Soirinsuo teaches a switch (see FIG. 8, 11, Switch) comprising a plurality of input ports for successively receiving said data packets (see FIG. 8, 11, the input channels ports 1104 for receiving cells/packets); and

an output port for forwarding data packets (see FIG. 8,11, output channel port 1106 for routing cells/packets; see col. 9, line 20-35; see col. 10, line 29-46);

wherein in response to a data packet being received out of order at a first of any one of the plurality input ports (see FIG. 8,11, upon receiving changed cells/packets which are "not" received in the same order in which they are transmitted due to network change path/routing (e.g. failure/congestion) at the first normal input port of 1104; see col. 9, line 20-35), data packets are

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discarded for a period of time at the first input port (see col. 9, line 40-45; see col. 10, line 10-30; all cells received at the first/normal/old channel port 1104 are discarded during switch-over interval/time) while being allowed at the other input ports (see col. 10, line 10-30, while/during receiving (and transmitting to the output port) from the new channel port).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide discarding and out of order, as taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

Regarding Claim 7, the claim, which has disclosed all the limitations of the respective claim 2. Therefore, it is subjected to the same rejection as set forth above in claim 2.

Regarding Claim 8, the claim, which has disclosed all the limitations of the respective claim 3. Therefore, it is subjected to the same rejection as set forth above in claim 3.

Regarding Claim 9, the claim, which has disclosed all the limitations of the respective claim 4. Therefore, it is subjected to the same rejection as set forth above in claim 4.

Regarding Claim 12, Soirinsuo discloses wherein the data packets are forwarded without the discarded data packets received at the first of the input ports (see FIG. 8, 11, packets/cells are routed/forwarded without discarded cells/packets received at the first input channel port 1104; note that since the received packets/cells are discarded at the first input channel port 1104, and thus the discarded packets/cells are not forward/routed; see col. 10, line 25-45).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the data packets are forwarded without the discarded data

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packets received at the first of the input ports, as taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

Regarding Claim 13, Almay discloses wherein the period of time is a predetermined period of time (see FIG. 2, a time is a predefined period of time; see col. 3, line 1-15).

Regarding Claim 14, Almay discloses wherein the period of time is terminated in response to a determination that a data packet condition is no longer possible (see FIG. 2, predetermined time period has elapsed/terminated when determining that receiving packet state/condition impossible since the a-b line/path is deactivated; see col. 3, line 10-30). Soirinsuo also discloses wherein the period of time is terminated in response to a determination that a data packet condition is no longer possible (see col. 10, line 25-30; the switch-over interval/time is terminated/ended after all packets/cells are discarded which causes the packet status/condition no longer possible).

Regarding Claim 15, Soirinsuo discloses discard data packets for a period of time at all input ports apart from a single input (see col. 9, line 40-45; see col. 10, line 10-30; discarding all cells for a switch-over interval/time at the first/normal/old channel port 1104 apart from the second/new input channel port 1104) where data packets are determined to be arriving in the correct order (see FIG. 8, where cells/packets are received in the same order in which they are transmitted (i.e. correct order); see col. 9, line 20-35, 40-45; see col. 10, line 10-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide discarding data packets for a period of time at all input ports apart from a single input where data packets are determined to be arriving in the correct order, as

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taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

Regarding Claim 16, Soirinsuo discloses wherein only data packets the single input where data packets are determined to be arriving in the correct order are forwarded (see col. 9, line 40-45; see col. 10, line 10-30; cell/packets in the new/second input channel where cells/packets are receiving/arriving in the same order in which they are transmitted (i.e. correct order) are forwarded/routed).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide only data packets the single input where data packets are determined to be arriving in the correct order are forwarded, as taught by Soirinsuo in the system of Almay, so that it would provide synchronize switchover and prevent frame integrity; see Soirinsuo col. 3, line 65 to col. 4, line 65.

8. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almay in view of Soirinsuo as applied to claims 1 and 6 above, and further in view of Merchant (US006535489B1).

Regarding Claims 5 and 10, the combined system of Almay and Soirinsuo discloses the communication network as set forth above in claims 1 and 6.

Neither Almay nor Soirinsuo explicitly disclose an Ethernet Network.

However, utilizing Ethernet 802.3 network is well known in the art in order to provide a standard connection for interoperability. In particular, Merchant discloses an Ethernet network (see FIG. 1, Ethernet 802.3 network; see col. 3, line 45-65).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ethernet network, as taught by Merchant, in the combined system of Almay and Soirinsuo, so that it would enable selectively forwarding data packets to appropriate destination based on Ethernet protocol; see Merchant col. 3, line 60-65.

Response to Arguments

9. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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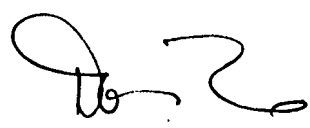
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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9/27/07


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